

# **NATIONAL SECURITY AND THE THREAT OF CLIMATE CHANGE**

# Background

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- **Debate on climate change was polarized in the U.S.**
  - Full implications not realized
- **Help inform the national debate**
- **Panel of respected military leaders**
  - Not weigh in on the science issues

# Questions Addressed

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- **What *conditions* are climate changes likely to produce around the world that would represent security risks to the United States?**
- **What are the ways in which these conditions may *affect* America's national security interests?**
- **What *actions* should the nation take to address the national security consequences of climate change?**



# **Military Advisory Board**

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**GEN Gordon R. Sullivan (Ret.), MAB Chairman**

**ADM Frank “Skip” Bowman (Ret.)**

**Lt Gen Lawrence P. Farrell Jr. (Ret.)**

**VADM Paul G. Gaffney II (Ret.)**

**GEN Paul Kern (Ret.)**

**ADM T. Joseph Lopez (Ret.)**

**ADM Donald “Don” L. Pilling (Ret.)**

**ADM Joseph W. Prueher (Ret.)**

**VADM Richard H. Truly (Ret.)**

**Gen Charles “Chuck” Wald (Ret.)**

**Gen Anthony C. “Tony” Zinni (Ret.)**

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**Sherri Goodman, Executive Director**



# Information Gathering Process

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- **Received briefings**
  - **Intelligence community**
  - **Business leaders**
  - **Climate scientists**
- **Reviewed literature**
- **Internal discussion, briefings from individual MAB members**
  - **Experiences of Regional Combatant Commanders**
- **Traveled to UK**
  - **Climate modelers**
  - **Senior government & military officials**
  - **Senior business leaders**

# Natural & Human Systems Affected

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**Water Supply**



**Agriculture**



**Human Health**



**Sea Level / Flood**





# **Mechanisms for Instability and Conflict**

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- **Instability in weak or failing states**
- **Cross-border resource conflicts**
- **Mass migrations**
  - Resource shortfalls
  - Land loss (sea level rise)
- **Humanitarian crises**
- **Direct effects on military operations**

# Regional Impacts



## Europe



**Tensions may rise as climate change exacerbates immigration from Africa and the Middle East**

**Europe will be focused inward, affecting coalitions and military exercises**



# Regional Impacts



## Africa

**Climate change will facilitate:**

- weakened governance
- economic collapse
- human migrations
- potential conflicts

**Stability operations and humanitarian missions could increase for U.S.**



# Regional Impacts



## Middle East

**Water security will be threatened – two-thirds of the Arab world already depends on water sources external to their borders**



**Loss of food and water security will increase pressure to emigrate across borders**

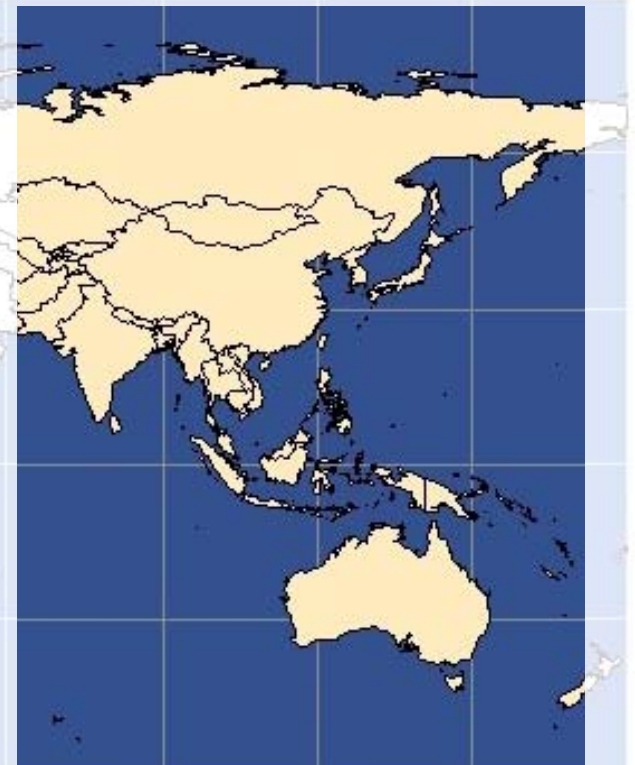
# Regional Impacts



## Asia

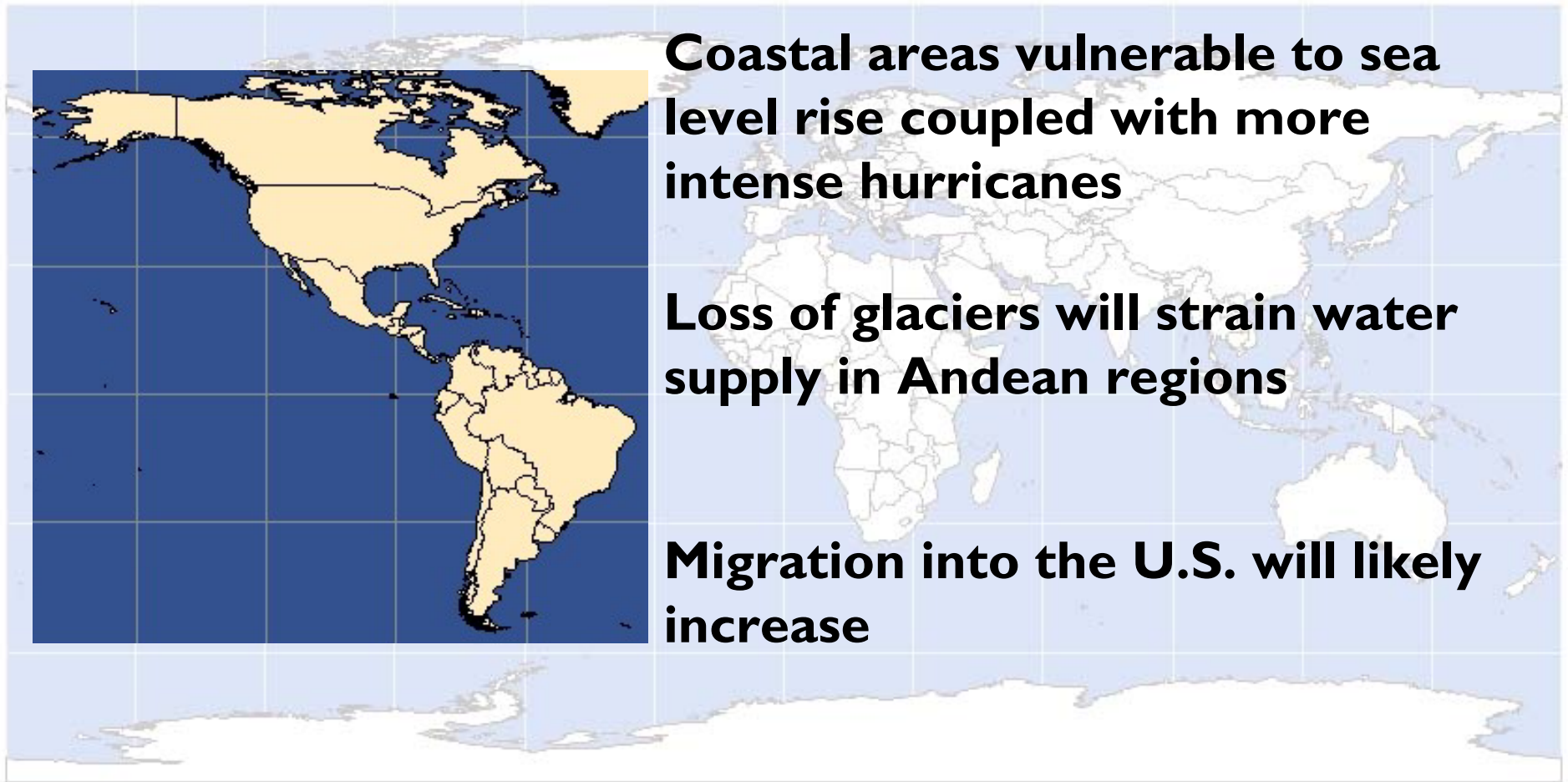
**Almost 40 percent (1.6 billion) of Asia's 4 billion people live within 45 miles of the coast**

**Reduced agricultural productivity, threats to water, and spread of infectious disease will stress the region**

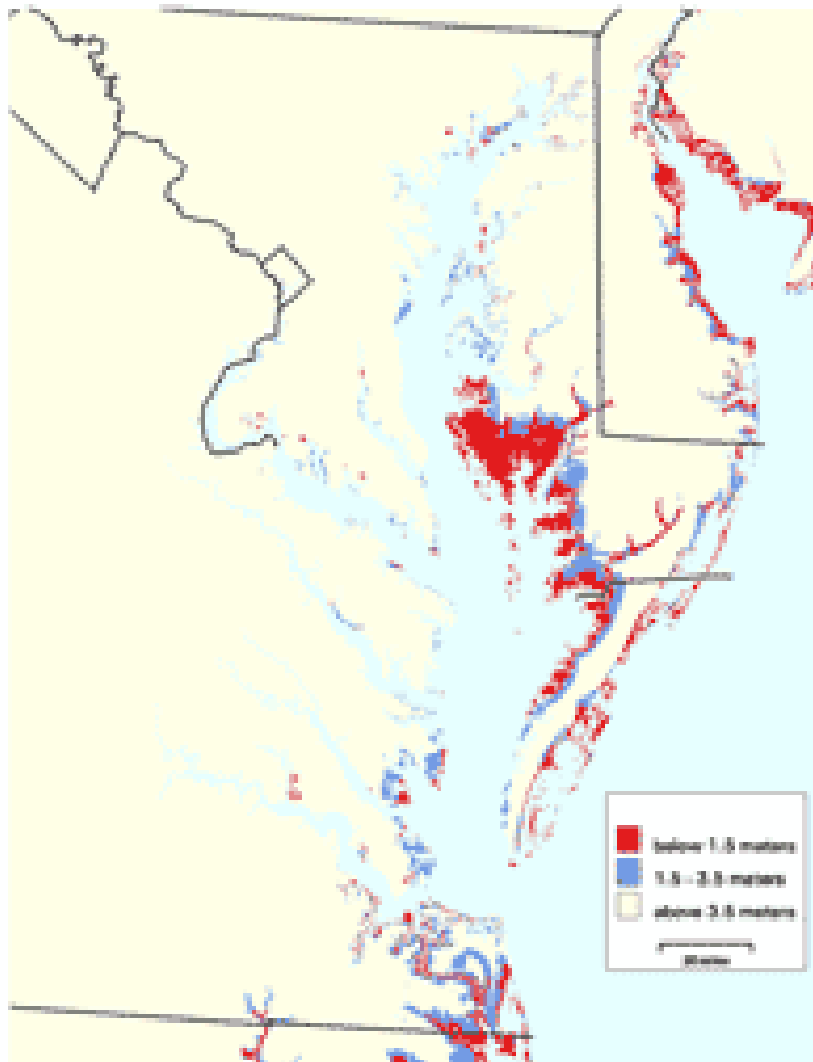


# Regional Impacts

## Western Hemisphere



# Virginia Sea Level Rise



More than 374 square miles of Virginia lies less than five feet above sea level

## Hampton, Norfolk, Virginia Beach Military Installations

1. Camp Peary Experimental Training Activity
2. Fleet Industrial Supply Center, Cheatham
3. Naval Weapons Station, Yorktown
4. Fort Eustis Military Reservation
5. Langley Air Force Base
6. US Army Garrison and Fort Monroe
7. Norfolk Naval Base/Camp Elmore
8. Little Creek Amphibious Base
9. US Army Garrison and Fort Story
10. Naval Air Station, Oceana
11. Fleet Combat Training Center, Atlantic Fleet
12. Fentress Auxiliary Landing Field
13. Naval Support Activity Norfolk, Northwest Annex
14. Norfolk Naval Base, St. Julian Creek Annex
15. Norfolk Naval Shipyard
16. US Naval Regional Medical Center
17. Fort Norfolk
18. United States Joint Forces Command
19. Craney Island Fuel Depot & Dredge Disposal

- The world's largest naval station is in Norfolk

- Virginia Beach

- Is a tourist destination that brings 11,400 jobs and \$895 million in revenue
- Is a commercial fishing industry worth \$130 million in 2005





# Conclusions

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- **Climate change acts as a threat multiplier for instability in some of the most volatile regions of the world**
- **Projected climate change will add to tensions even in stable regions of the world**
- **Climate change, national security, and energy dependence are a related set of challenges**
- **Projected climate change poses a serious threat to America's national security**



# **GEN Sullivan on Risk**

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**We never have 100% certainty.**

**If you wait until you have 100% certainty,  
something bad is going to happen on the  
battlefield.**

**That's something we know.**





# Recommendations

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- **National security consequences of climate change should be fully integrated into national security and national defense strategies**
- **U.S. should commit to stronger national and international roles to help stabilize climate change at levels that will avoid significant disruption to global security and stability**
- **U.S. should commit to global partnerships that help less developed nations build the capacity and resiliency to better manage climate impacts**



## **Recommendations (continued)**

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- **The Department of Defense should enhance operational capability by accelerating the adoption of improved business processes and innovative technologies that result in improved U.S. combat power through energy efficiency**
- **The Department of Defense should conduct an assessment of the impact on U.S. military installations worldwide of rising sea levels, extreme weather events, and other projected climate change impacts**



# **Legislative Impact: Recommendation I**

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- **National Intelligence Estimate on security implications of climate change:**
  - Intel Community already writing National Intelligence Estimate; expected Spring 2008
  - House version includes NIE-directives; Senate version does not (as of 3 Oct)
- **Incorporation into Nat'l Security & Defense Strategies:**
  - National Defense Authorization Act includes language from report

## **Legislative Impact: Recommendation 2**

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- **Senators Warner and Lieberman have introduced the America's Climate Security Act (ACSA) of 2007**
  - **If enacted, the ACSA would achieve substantial, long-term cuts in U.S. greenhouse-gas emissions**
  - **It is projected to reduce total U.S. greenhouse-gas emissions by as much as 70% of the 2005 level in 2050**



# **A Final Thought**

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**We will pay for this one way or another.**

**We will pay to reduce greenhouse gas emissions today,  
and we'll have to take an economic hit of some kind.**

**Or, we will pay the price later in military terms.**

**And that will involve human lives.**

**There will be a human toll.**

**— Gen Zinni**



## Back-up Slides

# United States Senate

WASHINGTON, DC 20510

April 17, 2007

## "National Security and the Threat of Climate Change" A New Report Provides Important Insights into Global Warming as a Threat Multiplier for Instability



Richard J. Durbin  
United States Senator



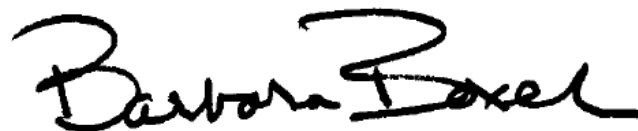
Chuck Hagel  
United States Senator



Joe Biden  
United States Senator



Richard Lugar  
United States Senator



Barbara Boxer  
United States Senator



Joseph Lieberman  
United States Senator



# Additional Public Forums

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- **Council on Foreign Relations (CFR) Washington D.C.**
- **CFR New York**
- **World Wildlife Fund**
- **Carnegie Endowment Environmental Roundtable**
- **Woodrow Wilson Center**
- **National Academy of Science**
- **Office of the Secretary of Defense**
- **Woods Hole Oceanographic Institution**
- **Friends of Europe Transatlantic Conference**
- **National Press Club (12 July)**



# Congressional Action

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**9 May 2007:**  
**Senate**  
**Foreign**  
**Relations**  
**Committee**  
**Hearing**





# Congressional Action

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110<sup>TH</sup> CONGRESS  
1<sup>ST</sup> SESSION

## S. 1018

To address security risks posed by global climate change and for other purposes.

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IN THE SENATE OF THE UNITED STATES

MARCH 28, 2007

Mr. DURBIN (for himself, Mr. HAGEL, and Mrs. FEINSTEIN) introduced the following bill; which was read twice and referred to the Select Committee on Intelligence

110th CONGRESS

1st Session

**H. R. 1961**

To address security risks posed by global climate change, and for other purposes.

**IN THE HOUSE OF REPRESENTATIVES**

**April 19, 2007**

**A BILL**

To address security risks posed by global climate change, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

**SECTION 1. SHORT TITLE.**

This Act may be cited as the 'Global Climate Change Security Oversight Act'.